

Temperature Sensor NTC5K-NCTS1B

The NTC5K-NCTS1B utilizes a high-resistance NTC thermistor, which enhances immunity to lead resistance, improving overall accuracy and performance. This sensor offers excellent stability and reliability, making it ideal for a wide range of temperature measurement and control applications.

Parameters

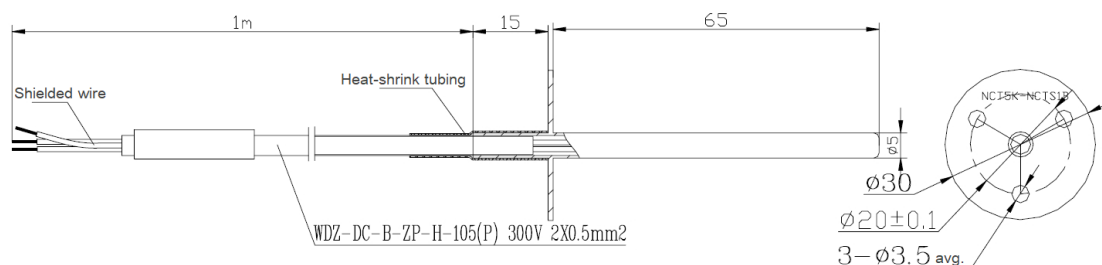
Operating Parameters

- Nominal Resistance: $R(25)=5k\Omega$
 $R(85)=0.536K\Omega$
- Material Constant: $B(25/85)=3970$
- Operating Temperature: $-40^{\circ}\text{C}\sim+70^{\circ}\text{C}$
- Storage Temperature: $-40^{\circ}\text{C}\sim+125^{\circ}\text{C}$
- Accuracy: $R(25)=5K\Omega\pm0.5\%$
 $B(25/85)=3970\pm0.5\%$
- Insulation Resistance: $\geq 100\text{ M}\Omega$
- Dielectric Strength: 750VAC/50Hz/1min

General Data

- Protection Rating: IP67
- Cable Type: Low-smoke, halogen-free cable
- Housing Material: SUS304 stainless steel

Outline & Interface



- Wiring Configuration: 3-wire system; shielding wire is not connected to the housing

Thermistor Calibration Table

R25=5K		B25/50=3934		B25/85=3970		B25/100=3988	
Temp °C	R. kΩ	Temp °C	R. kΩ	Temp °C	R. kΩ	Temp °C	R. kΩ
-50	334.785	-	-	-	-	-	-
-49	311.845	1	15.518	51	1.735	101	0.330
-48	290.620	2	14.752	52	1.670	102	0.321
-47	270.972	3	14.029	53	1.609	103	0.312
-46	252.776	4	13.345	54	1.550	104	0.303
-45	235.915	5	12.698	55	1.494	105	0.294
-44	220.284	6	12.087	56	1.440	106	0.286
-43	205.786	7	11.508	57	1.388	107	0.278
-42	192.332	8	10.961	58	1.338	108	0.270
-41	179.842	9	10.443	59	1.290	109	0.263
-40	168.240	10	9.952	60	1.245	110	0.256
-39	157.459	11	9.487	61	1.201	111	0.249
-38	147.435	12	9.046	62	1.159	112	0.242
-37	138.111	13	8.628	63	1.118	113	0.235
-36	129.435	14	8.232	64	1.079	114	0.229
-35	121.357	15	7.857	65	1.042	115	0.223
-34	113.833	16	7.500	66	1.006	116	0.217
-33	106.821	17	7.162	67	0.972	117	0.211
-32	100.285	18	6.841	68	0.939	118	0.205
-31	94.188	19	6.536	69	0.907	119	0.200
-30	88.500	20	6.246	70	0.877	120	0.195
-29	83.190	21	5.971	71	0.848	121	0.190

Cont.

Temp °C	R. kΩ	Temp °C	R. kΩ	Temp °C	R. kΩ	Temp °C	R. kΩ
-28	78.231	22	5.710	72	0.819	122	0.185
-27	73.597	23	5.461	73	0.792	123	0.180
-26	69.267	24	5.225	74	0.766	124	0.175
-25	65.217	25	5.000	75	0.741	125	0.171
-24	61.429	26	4.786	76	0.717	126	0.166
-23	57.884	27	4.582	77	0.694	127	0.162
-22	54.564	28	4.389	78	0.671	128	0.158
-21	51.456	29	4.204	79	0.650	129	0.154
-20	48.543	30	4.028	80	0.629	130	0.150
-19	45.812	31	3.861	81	0.609	131	0.146
-18	43.251	32	3.701	82	0.590	132	0.143
-17	40.849	33	3.549	83	0.571	133	0.139
-16	38.595	34	3.404	84	0.553	134	0.136
-15	36.478	35	3.266	85	0.536	135	0.133
-14	34.491	36	3.134	86	0.520	136	0.129
-13	32.623	37	3.008	87	0.504	137	0.126
-12	30.868	38	2.888	88	0.488	138	0.123
-11	29.217	39	2.773	89	0.473	139	0.120
-10	27.665	40	2.663	90	0.459	140	0.117
-9	26.204	41	2.559	91	0.445	141	0.114
-8	24.829	42	2.459	92	0.432	142	0.112
-7	23.534	43	2.363	93	0.419	143	0.109
-6	22.314	44	2.272	94	0.406	144	0.107
-5	21.165	45	2.184	95	0.394	145	0.104
-4	20.081	46	2.101	96	0.383	146	0.102
-3	19.060	47	2.021	97	0.371	147	0.099
-2	18.096	48	1.945	98	0.361	148	0.097
-1	17.187	49	1.871	99	0.350	149	0.095
0	16.328	50	1.801	100	0.340	150	0.093